

REMARKS/ARGUMENTS

Upon entry of the above amendment, claims 1-3 and 6-8 will have been canceled, claims 4-5 and 9 will have been amended, and claims 10-13 will have been newly submitted for consideration by the Examiner. Thus, claims 4-5 and 9-13 remain pending.

In view of the above, Applicant respectfully requests reconsideration of the outstanding objection and rejections of the claims pending in the present application. Such action is respectfully requested and is now believed to be appropriate and proper.

Initially, Applicant would like to express his appreciation to the Examiner for the detailed Official Action provided, for the acceptance of the drawings filed in the present application on March 23, 2001, and for the acknowledgment of Applicant's claim for priority under 35 U.S.C § 119 and receipt of the certified copy of the priority document, in the Official Action.

Applicant further notes with appreciation the Examiner's acknowledgment of Applicant's Information Disclosure Statements filed in the present application on June 26, 2001, and July 1, 2004 by the return of the initialed and signed PTO-1449 Forms, and for consideration of the documents cited in the Information Disclosure Statements.

Turning to the merits of the action, the Examiner has objected to claims 4 and 9, as being dependent upon a rejected base claim, but has indicated that they would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. By the present amendment, Applicant has amended claims 4 and 9 to be rewritten in independent form including all of the limitations of the

base claim and any intervening claims. Thus, Applicant respectfully requests that the Examiner withdraw the objection to claims 4 and 9 and allow the same.

In amending the claims of the present application, Applicant has also revised the language thereof to eliminate "means for" and "step of" terminology and has otherwise revised the claim language to enhance clarity. Moreover, by rewriting claims 4 and 9 into independent form, Applicant is not acquiescing in the propriety of any of Examiner's rejections, but is merely acting to expedite the issuance of a patent.

The Examiner has rejected claim 5 under 35 U.S.C § 103(a), as being unpatentable over TORE and ASANO in view of NISHIOKA et al. (U.S. Patent No. 6,311,233). Further, by the present amendment, Applicant has amended claim 5 to be dependent on amended and patentable claim 4. Thus, Applicant respectfully requests that the Examiner withdraw the rejection to claim 5.

Further, the Examiner has rejected claims 1, 2, and 6 under 35 U.S.C § 103(a), as being unpatentable over TORE (U.S. Patent No. 6,310, 926) in view of ASANO (should be HASHIMOTO) (U.S. Patent No. 4, 991, 184). The Examiner also has rejected claim 3 under 35 U.S.C § 103(a), as being unpatentable over TORE in view of Applicant's prior art. Further, the Examiner has rejected claim 7 under 35 U.S.C § 103(a), as being unpatentable over TORE, ASANO, and Applicant's prior art in view of CHU et al. (U.S. Patent No. 6,728,308). The Examiner has rejected claim 8 under 35 U.S.C § 103(a), as being unpatentable over TORE, ASANO, and CHU in view of Applicant's prior art.

As noted above, Applicant has canceled these rejected claims and has submitted new claims 10-13. Applicant respectfully traverses the above rejections

based on the pending claims 10-13 and will discuss the rejection with respect to the pending claims in the present application as will be set forth herein below. The newly added claims merely clarify the subject matter recited in the canceled claims, but do not narrow the scope of the claims.

Applicant's claims relate to a modem apparatus operating according to Recommendation V.34 that receives one of a PPh signal and a Sh signal at the beginning of a communication on a control channel. The modem apparatus comprises a demodulator which demodulates the received symbol, the received symbol being modulated in quadrature amplitude modulation. The modem apparatus also comprises a controller which detects a first rotation direction from a first demodulated symbol on a signal space diagram to a second demodulated symbol on the signal space diagram, and detects a second rotation direction from the second demodulated symbol on the signal space diagram to a third demodulated symbol on the signal space diagram. The first demodulated symbol, the second demodulated symbol, and the third demodulated symbol are consecutively demodulated. Further, the controller determines receipt of the Sh signal when the first rotation direction and the second rotation direction are detected to be a same direction on the signal space diagram. Claim 12 recites a related method.

On the contrary, TORE and ASANO do not relate to a modem apparatus according to Recommendation V. 34. Thus, TORE and ASANO do not disclose how to determine that a received signal is a Sh signal at the beginning of a communication on a control channel. TORE and ASANO also do not disclose utilizing a rotation direction of a demodulated symbol in order to detect the Sh signal. On the other hand,

the present invention relates to a modem apparatus according to Recommendation V.34, and to how to determine receipt of a Sh signal at the beginning of a control channel, as specified in Recommendation V.34. The present invention utilizes a rotation direction of a demodulated symbol in order to detect the Sh signal. Thus, the present invention is clearly distinguished over the combination of TORE and ASANO.

Therefore, it is respectfully submitted that the features recited in Applicant's claims 10-13 are not disclosed in the combination of TORE and SANO cited by the Examiner.

CHU et al. relates to a modem apparatus operating according to Recommendation V.34 and to re-negotiating symbol rate so as to optimize a transmission throughout of the modem apparatus. However, CHU et al. does not disclose how to determine receipt of the Sh signal at the beginning of a communication on a control channel. CHU et al. also does not disclose utilizing a rotation direction of a demodulated symbol in order to detect the Sh signal. Thus, the present invention is also completely distinguished over CHU et al., since CHU et al. does not disclose the above features recited in Applicant's claims 10-13.

Thus, it is respectfully submitted that the features recited in Applicant's claims 10-13 are not also disclosed in the combination including CHU et al. cited by the Examiner. Thus, the pending claims are submitted to be patentable over the Examiner's proposed combination of references.

The Examiner points out in the Official Action that Applicant admits in the specification that it is well-known to identify "a control signal such as (Sh signal, etc) in compliance with Recommendation V.34 by detecting coordinates on a signal space

diagram of reception symbols and detecting a modulation pattern of consecutive reception symbols". However, Applicant does not admit that it is well-known to utilize a rotation direction of a demodulated symbol in order to detect a modulation pattern of consecutive reception symbols, since utilizing a rotation direction of a demodulated symbol in order to detect a modulation pattern of consecutive reception symbols is a feature of the present invention, in the claimed combinations.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the outstanding objections and rejections, and an indication of the allowability of all the claims pending in the present application, in due course.

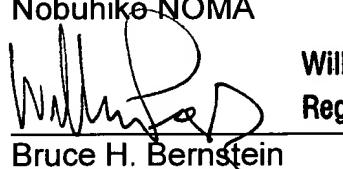
SUMMARY AND CONCLUSION

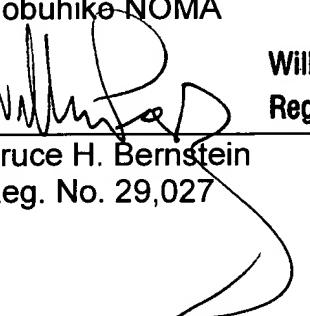
Applicant has made a sincere effort to place the present application in condition for allowance and believes that he has now done so. Applicant has canceled some rejected claims, has amended the objected to claims, and has submitted the new claims for consideration by the Examiner. With respect to the pending claims, Applicant has clarified the subject matter thereof. Accordingly, Applicant has provided a clear evidentiary basis supporting the patentability of all claims in the present application and respectfully requests an indication of the allowability of all the claims pending in the present application in due course.

The amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should the Examiner have any questions or comments regarding this Response, or the present application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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